

# Installation Guide

Wyse® Z Class Conversion to ThinOS

Wyse® USB Firmware Tool™ Release 1.19

Products: Z50D, Z50S, Z90D7, Z90D7B, Z90D7p, Z90DE7, Z90DE7p,  
Z90DEW, Z90DW, Z90S7, Z90S7p, Z90SW

Issue: 080113  
PN: 883887-33L Rev. A

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## Ordering Information

For availability, pricing, and ordering information in the United States and Canada, call 1-800-GET-WYSE (1-800-438-9973) or visit us at [wyse.com](http://wyse.com). In all other countries, contact your sales representative.



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# 1

## Introduction

This guide provides the instructions you need to install and use Wyse® USB Firmware Tool™ to convert the following Wyse D class thin clients to ThinOS:

- Z50D
- Z90D7
- Z90D7p
- Z90DE7p
- Z90DW
- Z90S7p
- Z50S
- Z90D7B
- Z90DE7
- Z90DEW
- Z90S7
- Z90SW

**WARNING:** ThinOS v8.0\_037 conversion **Does Not support:**

- **Wireless** (after conversion, Wireless will not work on Wireless devices).
  - No support for the Intel or Atheros wireless chipsets that are included in devices running Windows and Linux operating systems.
  - If you require Wireless, you can purchase a Z10D IW (PN#909673-01L).
- **USB 3.0 ports** (after conversion, ports will function as USB 2.0 ports).
- **TPM functionality** (after conversion, TPM will not work on TPM devices).

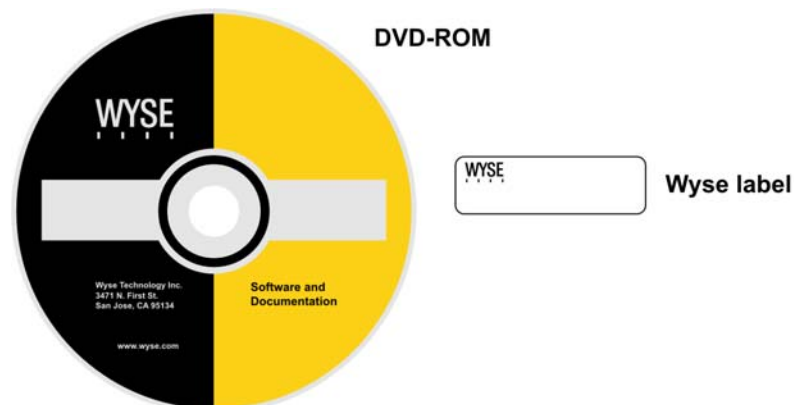
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## Kit Contents

The conversion kit includes:

- *1 Year ThinOS Maintenance* (you will receive an email from Wyse or your reseller with full instructions)
- *Conversion Software Assembly DVD-ROM*
- *Wyse Conversion Labels* (you must attach a Wyse label to each converted thin client)

**Figure 1** Kit contents



The *Conversion Software Assembly DVD-ROM* contains:

- *A PDF of this Reference Guide*
- *Wyse USB Firmware Tool Release 1.19*
- *Z Class ThinOS Conversion Image* folder containing the following files:
  - bios.img
  - commandsXml.xml
  - par1.img
- *Z Class ThinOS 3.0D BIOS Image* folder containing the following files:
  - bios.img

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## Wyse Technical Support

To access Wyse technical resources, visit <http://www.wyse.com/support>. If you still have questions, you can submit your questions using the Wyse Self-Service Center at <http://support.wyse.com/selfservice.html> or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 6:00 A.M. to 5:00 P.M. Pacific Time, Monday through Friday.

To access international support, visit <http://www.wyse.com/global>.

## Related Documentation and Services

Fact Sheets containing the features of hardware products are available on the Wyse Web site. Go to <http://www.wyse.com/products> and use the *Cloud clients* tab to locate and download the Fact Sheet for your hardware product.

Administrator and other documentation for your cloud client model are available at: <http://www.wyse.com/manuals>.

## Wyse Online Community

Wyse maintains an online community where users of our products can seek and exchange information on user forums. Visit the Wyse Online Community forums at: <http://community.wyse.com/forum>.



# 2

## Converting Wyse Z Class to ThinOS

This chapter includes the requirements and procedures you need to install and use Wyse® USB Firmware Tool™ to update your thin client to ThinOS firmware.

**TIP:** The purpose of the Wyse USB Firmware Tool is to configure a bootable USB key for device firmware. In the following procedures, you will create two configured USB keys containing the firmware contents that you need, and then boot from these configured USB keys on the thin clients you want to convert to push the contents of the USB key onto these *target* devices.

**EXTREMELY IMPORTANT:** You must perform the steps to create and use the two configured USB keys on each thin client as noted. You *cannot* completely convert one thin client and then use the USB Firmware Tool to pull and push that image to your other thin clients.

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### Requirements

- Windows Server 2008 R2 SP1
- Windows 7 Enterprise (32-bit and 64-bit)
- Windows 7 Ultimate (32-bit and 64-bit)
- 2 USB Keys:
  - USB 2.0 only
- Each USB key size should be 16 GB (see also "USB Keys - Troubleshooting Boot Issues")

**CAUTION:** During the USB key configuration process the USB keys will be reformatted.

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## Procedures

**IMPORTANT:** Complete the following procedures as an administrator (administrator privileges are required).

Step 1: Copy the Z Class ThinOS Conversion Image Folder and Z Class ThinOS 3.0D BIOS Image Folder to Your Local Hard Drive

Navigate to the *Z Class ThinOS Conversion Image* folder and the *Z Class ThinOS 3.0D BIOS Image* folder (contained on the *Conversion Software Assembly DVD-ROM*) and copy them to your local hard drive.

Step 2: Install Wyse USB Firmware Tool v1.19.0.4

1. Navigate to the *Wyse USB Firmware Tool v1.19.0.4\_GA.exe* (contained on the *Conversion Software Assembly DVD-ROM*) and double-click it to execute the file and open the *WinZip Self-Extractor* dialog box.
2. Enter the destination folder you want (for example, **C:\USBFT**) in the **Unzip to folder** box, and then click **Unzip** to extract all files from the *Wyse USB Firmware Tool v1.19.0.4\_GA.exe* file into the folder. The default directory for the extracted files is **Wyse USB Firmware Tool**.  
**CAUTION:** It is not recommended to use your desktop for the destination folder as there are several files that will be extracted from the .exe file.
3. After installation, create a shortcut on the desktop for the *Wyse USB Firmware Tool.exe* file (see your operating system documentation).

Step 3: Use Wyse USB Firmware Tool to Configure a Single USB Key that will Push Firmware

**CAUTION:** Complete the configuration procedures as an administrator. For Windows 7 Enterprise and Windows 7 Ultimate, right-click on **Wyse USB Firmware Tool.exe** and select the *Run as administrator* option.

1. Right-click the shortcut on the desktop for the *Wyse USB Firmware Tool.exe* file and select *Run as administrator* to run the tool and open the *Wyse USB Firmware Tool* wizard (the welcome page provides the product version and description, and a link to view the Wyse end user license agreement).

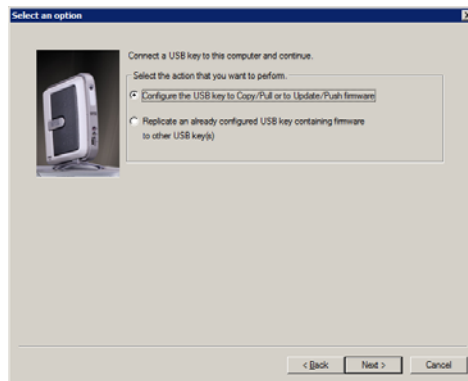
**Figure 2** Wyse USB Firmware Tool wizard



2. Click **Next** to open the **Select an Option** dialog box.

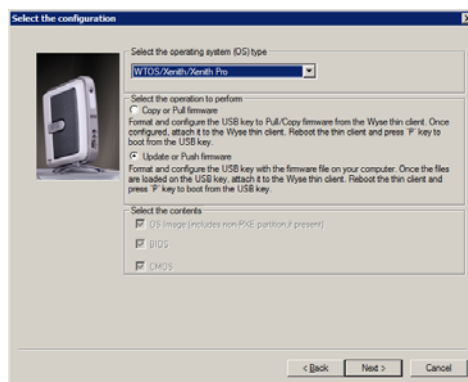


**Figure 3 Configuration options**



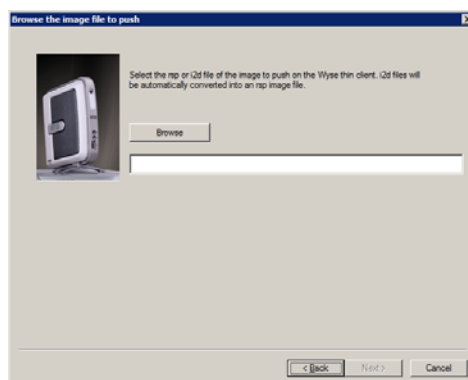
3. Select the **Configure the USB key to Copy/Pull or to Update/Push firmware** option, and then click **Next** to open the **Select the Configuration** dialog box.

**Figure 4 Update firmware options**

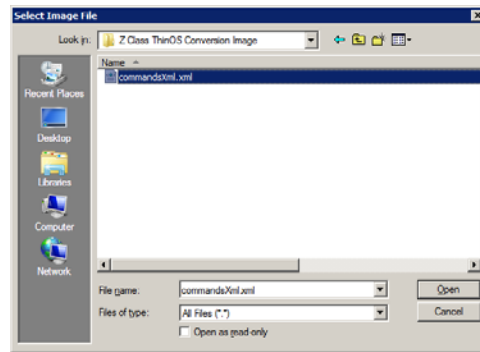


4. Select the **WTOS/Xenith/Xenith Pro** operating system (OS) type option (note that *OS Image*, *BIOS*, and *CMOS* are selected by default).
5. Select the **Update or Push Firmware** operation to perform option.
6. Click **Next** to open the browse dialog box.

**Figure 5 Browse for image file**



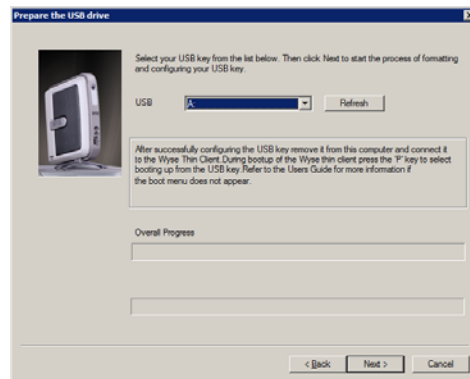
7. Click **Browse**.

**Figure 6** Browse to select commandsXml.xml

8. Navigate to the *Z Class ThinOS Conversion Image* folder on your hard drive (this is the location you selected in "Step 1: Copy the Z Class ThinOS Conversion Image Folder and Z Class ThinOS 3.0D BIOS Image Folder to Your Local Hard Drive"), click on the **commandsXml.xml** file to select it (you may need to select the *All Files* option from the *Files of Type* box to display the **commandsXml.xml** file for selection), and then click **Open**.

**CAUTION:** Be sure to use the **commandsXml.xml** file you extracted in "Step 1: Copy the Z Class ThinOS Conversion Image Folder and Z Class ThinOS 3.0D BIOS Image Folder to Your Local Hard Drive." **DO NOT** use the **commandsXml.xml** file directly from the *Conversion Software Assembly DVD-ROM*.

9. In the browse dialog box, click **Next** to open the **Prepare the USB Drive** dialog box.

**Figure 7** Prepare USB key for configuration

10. Select the USB key onto which you want the configurations (you can use **Refresh** as needed to recognize an inserted USB key), and then click **Next**. The progress bars show the overall (formatting and configuration) progress and task progress.

**CAUTION:** DO NOT interrupt the formatting and configuration process. All process requirements are done automatically.

11. After configuration, click **Finish** to close the wizard and then remove the configured USB key for use (you will use the configured USB key on your *target* devices).

**TIP:** At this time you can also *replicate/duplicate* the configured USB key (containing the firmware you want to push) for simultaneous usage on target devices (by users in several locations at the same time). For full Wyse USB Firmware Tool details, see *Users Guide: Wyse® USB Firmware Tool 1.19*.

#### Step 4: Use the Configured USB Key to Install Firmware on Each Thin Client

In this step, you will boot each thin client you want to convert from the configured USB key so that the USB key will *push the contents from the USB key onto the target device*.

**NOTE:** BIOS selection, movement, and exit instructions are displayed in the BIOS window.

1. Be sure the client is shut down and disconnected from any network.
2. Insert the configured USB key into a thin client USB 2.0 port.
3. Power on the thin client and during boot, press and hold the **Delete** key.
4. Enter the password **Fireport** (this is case sensitive) and press **Enter**.
5. Select the **Advanced** tab.
6. Using the down arrow key, select the **Boot from USB** option and press **Enter**.
7. Select the **Enabled** option and press **Enter**.
8. Select the **Boot** tab.
9. Select the **USB HDD** option (displaying your USB key vendor name) and move it to the *Boot Priority Order 1* position by using the + key.
10. Press the **F10** key to save, exit, and reboot the client from the configured USB key.  
When booting a *target device* from the configured USB key (*containing the contents to be pushed to a target device*), you will be prompted to continue with the *push* process (to continue, type **y** and press **Enter**). Once the *push* process is complete, you *must* reboot (press **Enter** and remove the USB key).  
**CAUTION:** *DO NOT* interrupt the installation/conversion process. All process requirements are done automatically. Some screens may display for several seconds during the process.
11. After a target device completes the installation/conversion process and displays the ThinOS desktop, continue with "Step 5: Verifying Thin Client Operation."

**TIP:** You can use the configured USB key to push the firmware onto as many target devices as you want (repeat "Step 4: Use the Configured USB Key to Install Firmware on Each Thin Client").

#### Step 5: Verifying Thin Client Operation

After the thin client displays the ThinOS desktop, you can verify the *System Version* and that your general system information is correct:

- *Classic Desktop* - Click **System Information** in the *Desktop Menu*.
  - *Wyse Zero Desktop* - Click the **System Information** icon on the *Wyse Zero Toolbar*.
1. On the *General* tab of the *System Information* window, verify the following:
    - *System Version* is **8.0\_037**.
  2. After verification, close the *System Information* window.

### Step 6: Update the BIOS on Each Converted Thin Client

In this step you will use the USB Firmware Tool to update the BIOS of each thin client to BIOS version **3.0D**. To do this, you must repeat the following steps **on a separate (second) USB key** using the **commandsXml.xml** file located in the *Z Class ThinOS 3.0D BIOS Image* folder on your hard drive (this is the location you selected in "Step 1: Copy the Z Class ThinOS Conversion Image Folder and Z Class ThinOS 3.0D BIOS Image Folder to Your Local Hard Drive"):

1. "Step 3: Use Wyse USB Firmware Tool to Configure a Single USB Key that will Push Firmware"
2. "Step 4: Use the Configured USB Key to Install Firmware on Each Thin Client"
3. "Step 5: Verifying Thin Client Operation"
4. After verifying thin client operation, verify the BIOS version by doing the following: Reboot your thin client and you will see a Wyse logo for a short period of time. During this period you can press and hold the **Delete** key to enter the BIOS to view the BIOS version (enter **Fireport** as the password). Be sure the BIOS version is **3.0D** (you can also note that for security, the **Boot from USB** option is disabled by default). After verification, close the *BIOS*. The thin client is ready for operation and setup by an administrator.

**TIP:** For more information, see *Administrators Guide: Wyse ThinOS™*.

Administrator and other documentation for your thin client model are available at:

<http://www.wyse.com/manuals>.

### Step 7: Attach a Wyse Conversion Label on Each Converted Thin Client

The conversion kit is supplied with *Wyse Conversion Labels* that must be attached to each thin client. Be sure you have purchased the amount of labels you need.

**CAUTION:** Failure to install the labels may cause delays in service and support. The serial number must be given to a Customer Support Technician to validate entitlement to support and service from Wyse. Failure to do so will result in the original operating system being loaded on the device and is in breach of your license agreement.

**Figure 8 Placement of Wyse Conversion Label (blank example)**



## Step 8: Obtain a Firmware Update

If you are under a Wyse maintenance contract, you can download ThinOS software updates from your *My Downloads* page in the Wyse Self-Service Center at <http://support.wyse.com/selfservice.html>. If you are not under maintenance and wish to gain access to ThinOS software updates, you must complete a product registration:

1. After purchase, you will receive an e-mail containing your software *Registration Code*.
2. Go to the Wyse Self-Service Center at <http://support.wyse.com/selfservice.html> and log in (or register and log in).
3. On the *Home* tab under *Support Resources*, click the **Registration, Licenses & Downloads (\*\*New)** link to open the *Registration, Licenses & Downloads* page of the *Support and Service Center* tab.
4. Enter the *Registration Code* that you received from Wyse for your purchase in the *Enter Registration Code* box and click **Register**. After the process is complete, the products you registered will display on the page.
5. Activate your software maintenance: Click **Activate** in the *Software Maintenance* list.
6. Download your software: On the page displaying the products you registered, select **Support and Service Center tab > Registration, Licenses & Downloads** to open the *Registration, Licenses & Downloads* page, hover your mouse pointer over the *My Downloads* link and select **ThinOS** to display available firmware, click the zip file you need (for example, *Z10D\_8.0\_037.zip*), and then follow the download instructions.  
**CAUTION:** Be sure to select the option in the *Z10D\_8.0\_037.zip* file that you need.  
For example:  
**If you are using an FTP server to update your firmware**, be sure to use the *ZD10\_wnos* file.  
**If you are using the USB Firmware Tool to update your firmware**, be sure to use the *Z10-8.0\_037-2G-Merlin.zip* file.

**WARNING:** Use of the Software on more than one device requires that you first purchase from Wyse additional copies of, or licenses to, the Software. Contact your local Wyse distributor or Wyse Inside Sales at 1-800-800-9973 option 1 or 1-408-473-1200 option 1.

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## Troubleshooting

This section contains general troubleshooting information.

### USB Keys - Troubleshooting Boot Issues

Due to different manufacturing processes on USB keys (and the variety of them), not all brands have been tested with the Wyse USB Firmware Tool. If you experience problems booting from a configured USB key, it is recommended that you try a different brand of USB key.

### SanDisk Cruiser Flash Drives - Troubleshooting Partition Issues

**Problem:** How can I properly use a SanDisk Cruiser flash drive to image supported devices using the Wyse USB Firmware Tool? (KB17735)

**Solution:** SanDisk flash drives come with support for U3 (for details on U3, see <http://u3.sandisk.com>). When you initially use these drives, you are prompted to select the use for the drive: *Apps and Storage* or only *Storage*. If you select the *Apps and Storage* option, the drive will create two partitions, one of which is identified as a CD and is a read only partition. This partition sometimes prevents the Wyse USB Firmware Tool to properly prepare the USB key for imaging a device. To resolve this problem you can do one of the following:

- Go to <http://www.sandisk.com>, search in the SanDisk Knowledge Base for document **2550**, and then follow the instructions in the documentation.
- Go to <http://www.sandisk.com/DriverDownload/driverList.asp>, select **USB Flash Drives** from the *Select Product Type* list, click **Find Driver**, select **U3 LaunchPad Remover**, click **Continue**, and then download and use the *U3 Launchpad Remover* according to the instructions.

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Issue: 080113**

Written and published by:  
Wyse Technology LLC, August 2013

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